

ARTICLE

# TWEET AND RETWEET JOURNALISM DURING THE PANDEMIC:

## dissemination of and engagement with news on Twitter



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**ABSTRACT** – Starting from a gap identified in the literature regarding the use of social networks by newspapers to disseminate urgent news, this article aims to study strategies of journalistic content in social media, particularly in the context of a public crisis and to compare the effectiveness of different types of news disseminated in this medium, namely in terms of reach and generated interaction. The following research question was defined: how popular was public health news in Brazil during the covid-19 pandemic? Based on contributions in the literature, a quantitative study was carried out, using the content analysis technique. The study enable to better understand the sharing behavior of news in Twitter, the consumption behavior of newspaper readers on social networks and the generation of news during the pandemic.

**Key words:** Twitter. Retweet. Journal. Journalism. Strategy. Pandemic. Covid-19.

## **JORNALISMO POR TUÍTE E RETUÍTE DURANTE A PANDEMIA: divulgação e engajamento com notícias no Twitter**

**RESUMO** – Partindo de uma lacuna identificada na literatura quanto ao uso das redes sociais pelos jornais para divulgação de notícias urgentes, este artigo tem como objetivo estudar estratégias no consumo de conteúdo jornalístico nas mídias sociais, particularmente durante uma crise mundial, e comparar a eficácia de diferentes modalidades de notícias divulgadas neste meio, nomeadamente ao nível do alcance e da interação gerada. Definiu-se a seguinte questão de pesquisa: qual a popularidade das notícias de saúde pública no Brasil durante a pandemia de covid-19? Com base nas contribuições da literatura, foi realizado um estudo quantitativo, utilizando a técnica de análise de conteúdo. O estudo possibilitou compreender melhor o comportamento de compartilhamento de notícias no Twitter, o comportamento de consumo dos leitores de jornais nas redes sociais e a geração de notícias durante a pandemia.

**Palavras-chave:** Twitter. Retuíte. Jornal. Jornalismo. Estratégia. Pandemia. Covid-19.

## **PERIODISMO DE TUIITS Y RETUIITS DURANTE LA PANDEMIA: divulgación y compromiso de las noticias en Twitter**

**RESUMEN** – A partir de una brecha identificada en la literatura sobre el uso de las redes sociales por parte de los periódicos para difundir noticias urgentes, este artículo tiene como objetivo estudiar estrategias en el consumo de periodistas de noticias en las redes sociales, particularmente durante una crisis global y comparar la efectividad de diferentes modalidades de las noticias difundidas en este medio, es decir, en términos de alcance e interacción generada. Se definió la siguiente pregunta de investigación: ¿cuál es la popularidad de las noticias de salud pública en Brasil durante la pandemia de covid-19? Con base en aportes de la literatura, se realizó un estudio cuantitativo utilizando la técnica de análisis de contenido. El estudio permitió comprender mejor el comportamiento de compartir noticias en Twitter, el comportamiento de consumo de los lectores de periódicos en las redes sociales y la generación de noticias durante la pandemia.

**Palabras-clave:** Twitter. Retuitear. Periódico. Periodismo. Estrategia. Pandemia. Covid-19.

### **1 Introduction**

Twitter has led to a significant change in how news is generated and consumed (Barnard, 2018; Hermida, 2010, 2013; Pang & Ng, 2017), and has become a popular source of information for its users. According to Holcomb et al. (2013), over half of Twitter users reported finding their news on the platform. As a result, journalists understand their role within this social networking site (Lasorsa et al., 2012; Molyneux & Mourão, 2019; Paulussen & Harder, 2014; Veenstra et al., 2015) and took advantage of the benefits offered by

Twitter to generate more value for the newspaper and improve their professional standing.

Although there is a vast amount of literature on Twitter, most of it focuses on journalism reshaping (Christensen, 2011; Hermida, 2013; Hong, 2012; Houston et al., 2020; Ju et al., 2014; Lee et al., 2017; Paulussen & Harder, 2014), the importance of Twitter during election periods (Barnard, 2018; Bruns, 2017; Bruns & Burgess, 2011; Currie Sivek, 2014; Guo et al., 2020; Jürgens & Jungherr, 2015; Pedro-Carañana et al., 2020), and social engagement through the platform (Ackland et al., 2019; Carpenter & Krutka, 2015; Ibrahim et al., 2017; Jünger & Fähnrich, 2020; Manzanaro et al., 2018; Read et al., 2019).

This article proposes an alternative approach: newspapers using Twitter to disseminate breaking news, mostly related to public health crises. Despite the indisputable importance of Twitter for disseminating breaking news (Barnard, 2018; Mihunov et al., 2020; Steensen, 2018), health issues are seldom covered (Freberg et al., 2013; Guidry et al., 2017). Additionally, the analysis of social engagement with this type of content (vital towards assessing its effectiveness and the role of newspapers that disseminate this type of news) has been disregarded.

Previous studies have investigated the consumption of news on sports (Shermak, 2018; Smith et al., 2019) and other events, but literature on the consumption of news on public health crises is lacking. Since the media (and particularly newspapers) play a fundamental role in educating audiences on sensitive issues, it is important to assess not only the newspapers' adoption of this type of information strategy but also the impacts (e.g., popularity and engagement) of this information initiatives.

This study focuses on the digital behavior of Brazilians during the covid-19 pandemic and looked to answer the following question: how popular is news on public health in Brazil during the pandemic? To look for answers to this question a quantitative study was conducted to analyze news dissemination behavior on Twitter. The study analyzed 1.944 tweets published by the Brazilian newspaper *Estadão* on its @Estadao profile on Twitter. Collected data comprised publications on 42 days in total, between January and June of 2020, to understand how news was consumed before and during the pandemic. Tweets were categorized according to the newspaper's editorials. Likes, retweets, and comments on these publications were also included. This analysis allowed us to assess not only the amount of

information generated for each topic during the pandemic but also its effectiveness in terms of engagement (e.g., likes, retweets), thereby identifying which news generated the most reactions from readers.

This article presents several contributions. It allows us to understand the consumption of news via Twitter, the evolution of news publishing about the pandemic, and how popular it was during social isolation. The study provides an important reflection on the digital engagement of online newsreaders and the increased spread of covid-19 around the world. In theoretical terms, this article combines important aspects of journalism literature found on Twitter with online news distribution strategies. In empirical terms, this article presents relevant data on news dissemination on Twitter, including engagement and evolution of news production during the pandemic. Overall, this article provides important indicators for journalists and newspaper managers on using social media to disseminate news and generate engagement with digital readers.

The rest of the article is organized as follows. The next section presents a review of the literature that addresses Twitter for newspapers, the benefits of Twitter for journalists, newspapers' strategies, and the role of retweets in disseminating news during an emergency. Then, the adopted methodology is described and the results of the empirical study are presented. Lastly, conclusions are drawn including implications and suggestions for future research.

## **2 Literature review**

### **2.1 Journalism on Twitter**

In recent years, newspaper companies have recognized the large potential of Twitter for multiplying news content, increasing traffic to their websites, and strengthening their relationship with their customers (Hedman, 2020; Hermida, 2013; Houston et al., 2020; Paulussen & Harder, 2014). Since then, newspapers have adapted to Twitter (Hermida, 2013; Hong, 2012; Paulussen & Harder, 2014; Wihbey et al., 2019), created profiles, and fully immersed themselves in this social networking site (Molyneux & Mourão, 2019; Tong & Lo, 2017). In addition to occupying traditional vehicles such as television, radio, and newspapers, journalists and newspapers saw a great opportunity to use social media to get closer to their audiences.

According to Hermida (2010), newspapers adjusted their discourse through posts, transformed large texts into short and objective sentences, and published their news on social platforms for their online readers. This shift to digital media, particularly social networking sites, means not only to change how messages are conveyed but also to adapt the news distribution strategy, particularly its objectives. This social media strategy can include increasing awareness, strengthening reader relationships, and selling digital news and online editions of the newspaper.

The newspapers' shift to digital media is strongly associated with the fact that readers spend more and more time online, carrying out several different activities, including keeping themselves informed. In fact, the consumption of news on social networking sites has continued to grow at an astonishing rate. According to the Pew Research Center report (2019), 34% of Americans prefer to read their news online, up 6% from the previous year. The same report also found that 74% of Twitter users reported having searched for news on Twitter. This social networking site is also seen as a source for obtaining information immediately (Lee et al., 2017) and has generated a large audience and given an edge to newspapers and journalists who make use of this environment.

## **2.2 Benefits of Twitter for journalists**

According to Broersma and Graham (2013), Twitter allows journalists to create closer connections between the reader and the stories and build different narratives with the community, offering new points of view, opinions, and comments on the news (Kaiser, 2016; McGregor & Molyneux, 2020), and providing communication professionals with a more dynamic platform to help them engage with their readers. For Houston et al. (2020), presenting their opinion about an event or subject on their profile pages helps journalists to further discuss that topic. This makes for a much more dynamic reader/journalist relationship enabling the reader to interact with both the journalist and the story.

Another benefit seen by journalists when using Twitter is its unlimited space; journalists have no post limit on Twitter (Sheffer et al., 2018; Tong & Lo, 2017), unlike a newspaper or magazine page which have character limits. With no space restrictions, journalists

can include more data to their news such as photos, videos, audio, or even retweet other news, thereby adding more value to the event and offering the reader more items in the narrative construction. It is also possible to post news and comments on topics that lack space in print editions. Hence, it is expected to find more diverse news online, including topics that are not usually covered by other news channels.

Barnard (2018) states that the quickness of digital platforms is one of the main advantages for journalists. Posting news in real-time is the best way to inform the public and to provide additional value to the readers. Another advantage for journalists using digital media is being able to provide live reports on longer-duration events. For example, many readers follow their country's election results on Twitter (Barnard, 2018; Bruns, 2017; Jungherr, 2016; Jürgens & Jungherr, 2015; Pedro-Carañana et al., 2020), and sports fans follow their teams' competitions in real-time (Li et al., 2018; Meier et al., 2019; Yan et al., 2019). The speed at which news can be posted about a real event makes journalism much more dynamic and essential in the reader's life.

The ability to generate thematic conversations with their audience is another advantage journalists find in the platform. This is because Twitter has become an information source for professionals. Their data and precise information (Gehrke & Benetti, 2020) give journalists access to any information. Hashtags are also important (O' et al., 2018; Salazar, 2017) as they can be used to search for posts by category and subject. So, when journalists add a hashtag to their post, they are categorizing the news within a specific theme, thereby providing a direct link to the subject for those who may wish to inform themselves further.

Another important tool for journalists is trending topics (Becker et al., 2011; Dindar & Yaman, 2018). Twitter organizes the most-tweeted-about events and topics in real-time, identifying the most popular ones in a list of trending discussions which is highlighted on the platform. This is an advantage to journalists as they can engage with popular topics in conversations and adapt their content production to the issues that readers are most concerned about or interested in.

## 2.3 Journalism strategies for Twitter

Journalism has increasingly benefited from the advantages offered by Twitter, thereby generating more value for its online audience. For Malik and Pfeffer (2016), newspapers that use Twitter to distribute their news receive positive results from readers. These results include increasing the reach of their news, generating traffic to the newspaper's webpage through links included in the posts, increasing the number of followers and audience loyalty, and more importantly, increasing users' engagement and interaction.

Along these same lines, Russell (2019) states that Twitter allows journalists to go more in-depth with their narratives, add external links, and even debate with their readers' views on the topic. Twitter is the platform that users employ the most to follow newspapers (Ju et al., 2014) and consider an information source. Readers who get their news from social networking sites also have specific profiles: newsreaders on Twitter are known to be more active (Broersma & Graham, 2013), as they frequently share, comment, and like the newspapers' tweets.

According to Horan (2013), there is more information consumption on topics of human interest, entertainment, and culture than there is on finance and business. Tewksbury (2003) states that readers prefer "light" news, but when issues of great importance to a community occur (hard news such as politics) the newspapers' reading rates increase. In line with these arguments, this article suggests that in times of crisis such as covid-19, the importance of Twitter as an information channel is expected to increase, especially regarding hard news on the crisis and responding to the users' need to receive real-time information about events.

Newspapers are aware of the importance that real-time information holds for their readers and therefore present content which focuses more on the economy, technology, and national news on their Twitter accounts (Bastos, 2015), and ultimately generates high levels of sharing. Zago and Bastos (2013, p. 130) confirm that "Twitter is mostly used to cover political, economic and social events (hard news)". One publishing strategy that newspapers use is to invest in content that retains the attention of their audience without irritating or boring them (Babiak & Trendafilova, 2010).

## 2.4 The role of retweets in breaking news

Cozma and Hallaq (2019) stress that the main interactions available in tweets are comments, retweets, hashtags, and links. Retweets are one of the most used interactions with news. Retweeting is an important activity on Twitter as it facilitates virality and the dissemination of information in real-time (Soboleva et al., 2017). It involves users' active participation by disseminating the most relevant news through sharing them with their peers. It is easy and quick to perform as it only takes one click for the user to retweet information (Smith et al., 2019; Suh et al., 2010).

Studies have shown that retweets are mostly associated with negative content (Hansen et al., 2011). Trying to better understand this sharing behavior, Suh et al. (2010) confirmed that content resources, URLs, and hashtags have a major influence on whether something will be retweeted. Over the years, Twitter has updated its functions and Soboleva et al. (2017) found that posts that include images also have an influence on one's decision to retweet.

Demonstrating the importance of Twitter for disseminating breaking news and real-time information, Carvin (2012) analyzed how it was used to inform the public about the Arab Spring protests. Retweets were widely used during the protests and since then the platform has established itself as a quick news distribution channel, playing an important role for citizens dealing with social movements, natural disasters, and violent actions.

Retweets have been used in this way for several years. For example, Acar and Muraki (2011) detailed what communication strategies were learned covering the tsunami in Japan on Twitter, while Mihunov et al. (2020) demonstrated how Twitter was used to warn the public about hurricane Harvey and keep them updated. In addition to natural disasters, the platform has also been used for violent actions, as Steensen (2018) notes regarding the terrorist attack in Norway. Public health authorities have also been using Twitter to quickly inform the public. Roberts et al. (2017) pointed out that the platform was used to inform and misinform the public about the Ebola crisis in the world. Likewise, Roberts et al. (2017) stated how the platform was used to encourage and discourage vaccination against the H1N1 pandemic.

Twitter was an important news distribution channel during the global covid-19 pandemic. However, Tasnim et al. (2020)

demonstrated that the platform has been used as a source of information and disinformation. Real news and fake news (Pulido et al., 2020) circulated across the social networking site and were retweeted. It is noteworthy that Twitter has recently announced new features, namely the ability to advise users to read the article before retweeting it and the adoption of an account verification strategy (blue seal) announced for 2021.

Several Brazilian newspapers used Twitter to report the numbers of deaths, and of infected people, and the social repercussions of the covid-19 pandemic. However, little is known about news distribution strategies and the impacts of these strategies. This article proposes to address the following research questions (RQ):

RQ1: How have newspapers integrated news on the public health crisis into their Twitter communications?

RQ2: How popular was public health news in newspapers during the pandemic?

### 3 Methodology

A quantitative study was carried out to meet the objectives of this research and answer the research questions posed in the previous section. Bryman (2012) describes the quantitative approach as based on theory and having a deductive nature, using measures and indicators to understand reality. An approach often used in social sciences, the quantitative study incorporates social reality as an external and objective reality, measures categories of behavior, and uses quantitative data and statistics to reduce, test, compare, classify and relate data (Bryman, 2012).

As the guiding question of this study is related to the popularity of public health news, the quantitative approach proved to be the most appropriate and useful approach to apply. More specifically, content analysis was carried out to quantify predetermined categories in a systematic and replicable way (Bryman, 2012). Bryman (2012) explains that content analysis is particularly suitable for quantitative research, for example, to analyze the quantity and interest shown by news published on social media, as is precisely the case in this study.

Thus, we quantitatively analyzed the most retweeted news on Twitter from the Brazilian newspaper *Estadão* (O Estado de S.Paulo newspaper). *Estadão* (as we shall refer to it) was founded 140 years

ago and is one of the 10 longest-standing companies in Brazil. It is a large circulation print newspaper and is also recognized for its online presence, namely on Twitter. Estadão currently has 1.8 million subscribers of its printed version and has the highest engagement rate on social networking sites among national newspapers with 5.5 million followers on Facebook, 6.5 million followers on Twitter, and more than 1.2 million on Instagram (Medialab, 2020). The newspaper was chosen for this study due to its current importance among Brazilian newspapers.

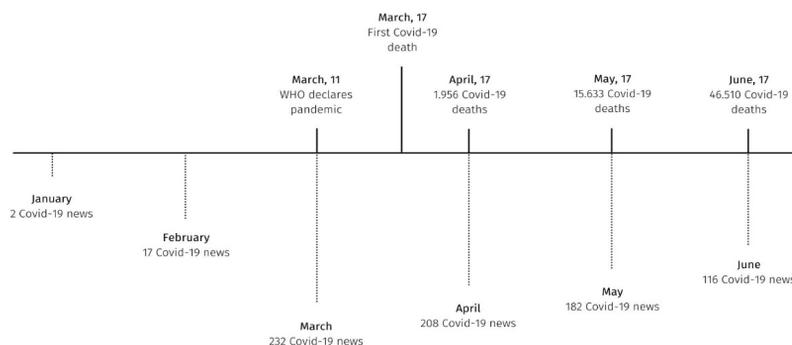
The research analyzed 1.944 tweets published on Estadão's Twitter profile page. Data collection took place on the 11th, 12th, 13th, 14th, 15th, 16th, and 17th of January, February, March, April, May, and June 2020, respectively. These dates were chosen randomly. The 1.944 tweets were initially categorized according to the following sections in the newspaper: City, Culture, Economy, Education, Sport, Gastronomy, Environment, World, Police, Politics, Health, Technology, and Coronavirus. The number of comments, likes, and retweets for each news post was counted. The analysis was performed manually.

## **4 Results**

### **4.1 Tweets about the pandemic**

This section, which analyzes the results of the study, firstly describes how the newspaper Estadão integrated the pandemic in its Twitter posts. During the analysis period, the number of tweets by Estadão on this topic varied considerably, as presented in figure 1. However, Estadão's use of Twitter to publish breaking news is evident, as alluded to in the literature (Barnard, 2018; Mihunov et al., 2020; Steensen, 2018).

**Figure 1** - Number of posts about the pandemic during the analysis period



The first news post on the coronavirus occurred on January 15th, 2020, and referred to the outbreak in China. At that time, the post referred to the virus in a generic nature and did not use any of the names that it would later come to adopt (coronavirus, covid-19).

@Estadão > New virus strain causes pneumonia outbreak in China (via @EstadaoSaude) – January 15th, 2020. (Engagement: 1 comment, 10 retweets, 26 likes).

This first post had a relatively low engagement. More news about the coronavirus was posted by the newspaper on Twitter in January and February, mostly associated with unexpected consequences and the fear that was developing around the virus, while all these situations were occurring abroad.

@Estadão > People wrap themselves in plastic for fear of the coronavirus, see the photos! <http://bit.ly/37m219N> - February 12th, 2020. Engagement: 21 comments, 157 retweets, 151 likes.

However, as the days went by, the virus began to spread across the planet and eventually reached Brazil. The first case of covid-19 in Brazil was recorded on February 26th (Aquino & Monteiro, 2020). At that time, the coronavirus was gaining visibility on social networking sites, including Estadão's profile page on Twitter. It is interesting to note that in the analysis period, March was the month with the most tweets by Estadão about covid-19 (figure 1). In fact, March was an atypical month for world journalism: the World Health Organization (WHO) declared the virus a pandemic (Roxby, 2020), Brazil registered the first coronavirus-related death (BBC, 2020), and Brazilian state governments started to

issue quarantines (Decreto Nº 515 de 17 de Março, 2020) to try to reduce the spread of the disease. Taking advantage of the speed at which social networking sites disseminate news (Barnard, 2018), the newspaper focused its efforts on providing more information to the public so they could protect themselves and avoid contamination. These results highlight the importance of Twitter for disseminating breaking news and urgent information, in line with what is pointed out in the literature (e.g., Acar & Muraky, 2011; Carvin, 2012; Mihunov et al., 2020).

The public responded by increasing their engagement with these publications. The report with the highest engagement in March presented the previous day's statistics on victims in several Brazilian states:

@Estadão > CORONAVÍRUS BRASIL: Amazonas: 1; Ceará: 5; Rio Grande do Norte: 1; Pernambuco: 16; Alagoas: 1; Sergipe: 4; Bahia: 3; Minas Gerais: 7; Espírito Santo: 1; Rio de Janeiro: 33; São Paulo: 164; Paraná: 6; Santa Catarina: 7; Rio Grande do Sul: 10; Mato Grosso do Sul: 4; Goiás: 6; Distrito Federal: 21<sup>1</sup>. – March 17th, 2020. Engagement: 538 comments, 1,200 retweets, 2,800 likes.

The following month, April, saw a large amount of content on the subject. There was, however, a larger diversity in the type of news being published. By using different approaches, the news posted sought to provide readers with more information about the virus, including prevention mechanisms, possible treatments, and political solutions to alleviate the crisis.

@Estadão > With the health system collapsing, Amazonas' government uses storage freezers for coronavirus victims – April 17th, 2020. Engagement: 131 comments, 642 retweets, 1,700 likes.

May and June registered a decrease in the number of posts published on the coronavirus, while the country finished the month with an increase in the number of deaths and infections.

@Estadão > Brazil records 844 deaths in the last 24 hours and registers more than 200 thousand cases of coronavirus – May 14th, 2020. Engagement: 51 comments, 137 retweets, 378 likes.

Of note is that the engagement values of this post are much lower than those of previous months, particularly the one mentioned above.

It is interesting to see how the number of posts about the coronavirus evolved from month to month when compared to other tweeted news. The total number of posts is presented in table 1, which compares the number of general news published by Estadão

on Twitter with the number of posts on the coronavirus. Table 1 shows a steady increase in the number of posts on the virus, the pandemic, and its consequences up until March, when the virus arrived in the country. Interestingly, the following months showed a decreased number of posts on the pandemic while general news on the country's political crisis, economic problems, regional difficulties, and other forms of leisure increased. What we noticed is that the total number of posts per month remained relatively stable, however, there was a tradeoff between posts about the pandemic and other news topics. The exception to this was the month of March which, as mentioned above, was an atypical month, one that included the virus being classified as a pandemic and the importance of warning Brazilians of the public health dangers considering the first recorded deaths in the country.

**Table 1** - General posts x Coronavirus posts

<b>Period</b>	<b>General posts</b>	<b>Coronavirus posts</b>	<b>Total</b>
January 11th to 17th	310	2	312
February 11th to 17th	301	17	318
March 11th to 17th	116	232	348
April 11th to 17th	114	208	322
May 11th to 17th	139	182	321
June 11th to 17th	206	116	322

It is also important to note that the posts on the pandemic were separated into several categories. In fact, the pandemic has changed how society lives around the world, affecting several areas besides health. Thus, the newspaper posted about the pandemic in other editorial sections, resulting in segmentation of posts on covid-19, as shown in table 2.

**Table 2** - Classification of posts on covid-19

<b>Editorial Sections</b>	<b>January</b>	<b>February</b>	<b>March</b>	<b>April</b>	<b>May</b>	<b>June</b>	<b>Total per section</b>
City			8	15	8	7	38
Culture			20	14	23	13	70
Economy			24	33	26	20	103
Education		1	9	2	3	6	21
Sports			19	9	13	4	45
Gastronomy						1	1
Environment						2	2
World	2	6	40	31	27	17	123
Police			1	9	3	4	17
Politics			51	38	25	16	130
Health		8	52	55	51	22	188
Technology		2	8	3	3	3	19
Total per month	2	17	232	209	182	115	757

It is important to draw attention to the fact that several editorial sections covered covid-19 in addition to issues of policy and health; however, there was a predominance of hard news, confirming what Zago and Bastos (2013) suggested regarding the type of news that dominates on Twitter.

It is also interesting to note that in the first few months of covid-19 (March, April and May), when emotions were more intense, coverage of the global pandemic in the editorial sections was also intensified, with the World section containing many posts about the virus.

The analysis of coronavirus news consumption shows an increase in the number of discussed topics, as demonstrated in table 2. In the beginning, the news addressed the disease in China and, eventually, its arrival in Brazil. In March, the posts focused on the impacts of the disease on people's lives and routines (school closings, cancellation of cultural and sporting events, the advance of the disease in the world) while in May they started to talk of a new approach and the "new normal" (concerts, sports events, the resumption of school classes). In June, the diversification of approaches to the virus increased, and articles on gastronomy and the environment were added to the editorial sections.

Consumers wanted to be informed about their everyday lives and, as Hermida (2013) explains, journalism on social media publishes facts that impact and portray people's lives. The disease in the world, the number of deaths, the consequences that isolation can have on communities, and the new normal were all major topics in the newspaper as it tried to fulfill its role of informing the public about everyday life.

## 4.2 Retweets

One important aspect to analyze is the posts that register the highest number of retweets and the multiplying power that public interaction provides publications with (Manzanaro et al., 2018). As table 3 shows, the covid-19-related news that were retweeted the most from January to June refer to the Brazilian president's firing of the health minister. According to Hansen et al. (2011), negative content has a strong influence on whether a post will be retweeted or not. A case in point is the firing of a health ministry official for his response to the pandemic, which generated many reactions from Twitter followers.

**Table 3** - Posts with the most retweets per month

Period	Tweet	Editorial section	Number of retweets
January 11	Judge says 'crap' can be praise and absolves man who cursed city guard <a href="http://bit.ly/37UDgIZ">http://bit.ly/37UDgIZ</a> -via @fausto_macedo	Politics	830
February 12	Guedes <sup>2</sup> criticizes low dollar: 'Housemaid goes to Disneyland. Hold on here.' <a href="http://bit.ly/37qHck1">http://bit.ly/37qHck1</a>	Economy	3.200
March 13	Ronaldinho <sup>3</sup> must play tournament in prison, not allowed to score goals; the championship trophy is a piglet.	Sports	7.300
April 16	Bolsonaro fires Mandetta from the Ministry of Health; oncologist Nelson Teich to take over <sup>4</sup>	Politics	8.600
May 11	Military personnel illegally received emergency aid of R\$ 600 <sup>5</sup> (via @EstadaoEconomia)	Coronavirus	3.700
June 17	Moraes <sup>6</sup> investigation is something never seen in the history of this country	Politics	3.800

The month which registered the most retweeted news during the analysis period is also the same month with the highest average number of retweets, as can be seen in table 4. The average number of tweets is much higher in March, April, and May than in the other months. Of note is that the average in April is more than double that of February, and more than triple of January. This appears to show that the predominance of news about covid-19 reported in table 1 is associated with a higher level of follower engagement. Although the literature indicates that Twitter has a high potential to increase the relationship (Hedman, 2020; Hermida, 2013; Houston et al., 2020; Paulussen & Harder, 2014) and connection (Broersma & Graham, 2013) with followers, in this study the theme of the publications had a clear association with the level of engagement. Indeed, the seriousness and importance of the news about the public health crisis did generate a higher level of follower engagement.

**Table 4** - Average retweets per month

Period	Month
January	35.69
February	52.36
March	102.51
April	118.30
May	109.97
June	79.45

These results become clearer when taking into consideration the average number of retweets by editorials, presented in table 5. It appears that the two themes with the most shares were news about the coronavirus and politics. In addition to being prominent on Twitter (Zago & Bastos, 2013), Tewksbury (2003) suggests that hard news have the highest number of views and is read the most during a crisis, which leads to increased sharing. This study demonstrates that, during the analysis period, there was a greater tendency to share hard news, although some so-called soft categories (such as sports) also had one of the highest levels of retweets. However, considering the public health crisis experienced during the analysis period and the fact that most of the tweeted news in three of the six

months analyzed were about covid-19, it is interesting to note that news about politics received on average one more retweet than news about the pandemic.

**Table 5** - Average number of retweets per editorial section

<b>Editorial section</b>	<b>Average No. of retweets</b>
Gastronomy	10
City	11
Technology	12
Education	16
Health	22
World	26
Environment	29
Police	50
Culture	52
Economy	61
Sports	85
Coronavirus	148
Politics	149

Further analysis of the news posts of the covid-19 section shows that those within a political context had the highest average number of retweets (table 6). As shown in table 2, the news about covid-19 with the most tweets on Estadão are related to health and politics, respectively. These data then reveal a link between content and retweet behavior (Hansen et al., 2011), but show a large volume of sharing news about not only health (the main theme of the crisis) but also news about political aspects related to the pandemic.

**Table 6** - Average number of retweets on covid-19 per section

<b>Covid-19 Editorial</b>	<b>Average No. of retweets</b>
Environment	9
Technology	17
Sports	18
Gastronomy	28
Police	38
Education	39
City	54
Culture	78
Economy	81
World	97
Health	190
Politics	292

This study demonstrates once the pandemic reached Brazil it diverted the attention of Brazilians away from other social issues. The political crisis has always been prominent in the media, and it did not fail to receive reader attention even during the pandemic. In global terms, there was a gradual growth in the number of retweets in Brazil from January to April; however, the average number of retweets decreased in May and June. Even though the pandemic is the most talked-about issue around the world, it was not the most retweeted topic in Brazil. The political crisis in the country was the most prominent issue and accounted for three of the most retweeted tweets, totaling 13.230 retweets. In line with this trend, this study shows that the news Brazilians consumed about the pandemic revolved mainly around social changes, but they were also highly attentive to the country's political movement, a behavior that corresponds with what Zago and Bastos (2013) concluded about the consumption of hard news.

## 5 Conclusion

This study helped understand how a leading Brazilian newspaper integrated public health news into its agenda and the results of Brazilians' engagement and consumption of news during

the pandemic. Estadão used Twitter as a major proponent to spread its news online (Mali & Pfeiffer, 2016) and used the speed of the platform (Barnard, 2018) to inform its audience, in real-time, about the global state of the disease, the number of deaths, political decisions, and ways Brazilians found to live life in the new normal. Most of the news that Estadão disseminated on Twitter in March, April, and May was about the pandemic. Doing this allowed the newspaper to establish a connection with its readers (Boerema & Graham, 2013) thus enabling for greater engagement and consumption of information.

This study provided us with a snapshot of online newspaper reader behavior during the first few months of the pandemic, showing a tendency of readers to engage with hard news, but not just related to health issues. In four of the six months analyzed, we found that the news with the greatest number of shares was related to Brazilian politics. The crisis in the judicial system, the economy minister's criticism of the rising value of the U.S. dollar, the resignation of the health minister, and cases of political corruption were the major news stories shared in January, February, April, and June, respectively. In line with research by Horan (2013), human interest stories are among the most searched issues online. Understandably, users want to know about facts and news that directly impact their lives, and one of those issues is politics, especially during a pandemic. There is also a great interest in emergencies or disasters, according to Mihunov et al. (2020).

Brazilians sought out factual information about the problems surrounding covid-19. The month of March presented the largest production of news on the subject. In the months following there were fewer news posts on the coronavirus. Even with a remarkably high number of deaths and the chaos revolving around the public health system, Brazilians were less interested in the pandemic. The pandemic initially attracted a lot of attention to the newspaper, but that attention started to decline, and Brazilians began to shift their interests to other issues besides the pandemic. Brazilians tend to be standard online readers and are active on the platform (Broersma & Graham, 2013); they share, comment and read the published news posts; however, their attention and engagement were divided between news on health and the virus and the country's political actions.

Due to the dynamic nature of effective communication strategies in social media, this article concludes that there is a

clear link between the type of news that is most popular with users (i.e., coronavirus and politics) and how the newspaper integrates the news about the public health crisis on Twitter, exploring the political aspects behind the fight against the pandemic while providing updates on the evolution of the disease in Brazil. Adding to what the literature says about greater consumption of hard news on Twitter (Zago & Bastos, 2013), this study demonstrates that the theme and the news-editorial are important factors in determining the level of follower engagement.

The main limitation of this study is related to sampling and the form in which data is collected. It is important to note that the generalization of conclusions depends on further research considering different samples, periods, and other newspapers. Future studies may consider comparing several newspapers, even from several countries. Using software (e.g., Python or R programming) for data collection would allow for the collection of more information, provide a broader sample, and even some level of automated data collection and analysis. This software could be valuable in future studies and research. Another suggestion would be to compare social platforms such as Facebook and Instagram and analyze the news-sharing behavior across these social networking sites. It would also be interesting for future studies to compare content strategies from various newspapers, as well as compare content strategies in different contexts of crisis. Additional research on the effectiveness of content strategies adopted by newspapers on SNS around the world to guide the use of digital channels in the sector would also be interesting for practitioners and academics.

## NOTES

- 1 Alagoas, Amazonas, Bahia, Ceará, Espírito Santo, Goiás, Mato Grosso do Sul, Minas Gerais, Paraná, Pernambuco, Rio de Janeiro, Rio Grande do Norte, Rio Grande do Sul, Santa Catarina, São Paulo, and Sergipe are all states in Brazil.
- 2 Paulo Roberto Nunes Guedes, Economy Minister of Brazil at the time of the analysis period.

- 3 World-famous Brazilian football player.
- 4 Jair Messias Bolsonaro, president of Brazil; Luiz Henrique Mandetta and Nelson Teich, both served as health ministers during the analysis period.
- 5 600 reais was equivalent to 100 American dollars at the time of the analysis.
- 6 Alexandre Moraes, Federal Supreme Court Minister at the time of the analysis period.

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